

Having thus described our invention, we now claim:

1. A control system for modulating a brake light of an automobile for enhanced display indication of braking of the automobile comprising:
 - 5 an integral modulation unit sized to be disposed within a casing of the brake light and interposed between a lamp of the brake light and an energy supply;
 - wherein the modulation unit includes means for sequentially adjusting power from the energy supply to the lamp for a first predetermined
 - 10 time interval concurrent with the braking of the automobile for generating a desired brightening and dimming of the lamp, and continuously supplying a constant power to the lamp after expiration of the first predetermined time interval during continued braking; and,
 - wherein a lockout timer precludes the sequential adjusting by the
 - 15 modulation unit for a second predetermined time interval after release of the braking for avoiding repetitive flashing in stop and go traffic.
2. The control system as defined in claim 1 wherein the modulation unit includes a pulse width modulator serially connected between the lamp and
- 20 the energy supply including a processor for lowering lamp power at selected intervals corresponding to the desired modulation, and wherein the processor includes an internal oscillator, selectively settable for controlling a rate of the adjusting.
- 25 3. The control system as defined in claim 2 wherein the lockout timer comprises a capacitor sized to discharge at a rate after the release of the brake wherein a failure to discharge below a preselected level is indicative of the precluding of the sequential interrupting.

4. A method of operating an interval modulator comprising a brake light of a vehicle for improved indication of braking of the vehicle, comprising steps of:

5 detecting the braking of the vehicle by a supply of energy to the brake light coincident with the braking;

sequentially adjusting the supply of energy via a modulator connected to the light for generating a brightening and dimming of the light during the braking;

10 detecting a time extent of the adjusting;
stopping the adjusting after a preselected time period so that the light is continually on during the braking;

after release of the braking, detecting a second preselected time period for locking out the sequentially adjusting for avoiding repetitive flashing during stop and go traffic.

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5. A brake light comprising:
a first region operative as a conventional brake light;
a second region separately controlled from the first region;
a controller operative to time a braking event and a period
20 between braking events and to selectively modulate the second region based on the timing of the braking event and a period between braking events.

6. The brake light of claim 5 wherein the first region comprises red light emitting diodes.

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7. The brake light of claim 5 wherein the second region comprises yellow light emitting diodes.

8. The brake light of claim 5 wherein the controller comprises a
30 lockout timer operative to compare a time interval between a previous braking event and a current braking event to a threshold time interval.

9. The brake light of claim 5 wherein the controller comprises a modulation interval timer operative to compare a duration of a braking event to a threshold time interval.

5 10. The brake light of claim 5 wherein the controller comprises a pulse width modulator operative to control a control element to modulate a current through light producing components of the second region.

10 11. A brake light controller operative to modulate a current through a light source, the brake light controller comprising:

a pulse width modulator operative to selectively modulate an average current through the light source;

15 a lockout timer operative to prevent the pulse width modulator from modulating the average current through the light source if the current through the light source had been modulated recently; and,

a modulation interval timer operative to limit a length of time the pulse width modulator modulates the average current through the light source.

20 12. The brake light controller of claim 11 wherein the lockout timer is operative to prevent the pulse width modulator from modulating the average current through the light source if a previous braking event ended less than about forty seconds prior to the beginning of a current braking event.

25 13. The brake light controller of claim 11 wherein the modulation interval timer is operative to prevent the pulse width modulator from modulating the average current through the light source for a period of about five seconds.